STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

RESEARCH QUARTERLY PROGRESS REPORT

MR-6068 (REV.5/93)

1. TITLE
DEVELOPMENT OF A NEW GUARDRAIL END TREATMENT (PHASE II)

2. FEDERAL STUDY NUMBER
F98OR50 C

3. OBJECTIVE
To develop a guardrail end treatment for highways that meets federal crash worthiness requirements, is completely nongating, costs less than similar proprietary devices, does not need to be flared away from the shoulder and is easy to maintain.

2a. CONTRACT NUMBER
N/A

4. EA *(DIV-UNIT-EA)*
65-338-680821

5. PRESENT WORK PLAN APPROVED ON:	**6.** ORIGINAL START	**7.** ESTIMATED COMPLETION	**8.** TIME ELAPSED	**9.** PROJECT COMPLETED TO DATE
Jul 1, 1997	Aug 7, 1997	Dec 2003	70% (4%/qtr)	18%

10. List specific major steps or phases to accomplish the objective.
Use the following symbols to indicate planned progress.
Circle symbol when actually accomplished.
S = Starting Date, **C** = Estimated Completion Date
List of Tasks:

FISCAL YEAR

	Prior	00/01 1st Jul Sep	00/01 2nd Oct Dec	00/01 3rd Jan Mar	00/01 4th Apr Jun	01/02 1st Jul Sep	01/02 2nd Oct Dec	01/02 3rd Jan Mar	01/02 4th Apr Jun	02/03 1st Jul Sep	02/03 2nd Oct Dec	02/03 3rd Jan Mar	02/03 4th Apr Jun	Beyond
1. Concept development & basic material testing				(S)	C	C								
2. Phase I Dynamic Testing (Basic Component Testing)						S		C						
3. Phase I I Dynamic Testing (Optional Thermal Testing).								S	C					
4. Phase I I I Dynamic Testing (Preliminary Full-scale Development Trials)									S		C			
5. Phase I V Dynamic Testing (Compliance Tests)											S		C	
6. Crash Test Data Analysis & Report													S	
7. Publish and Distribute Report														
8. Request Approval and Acceptance from FHWA & Traffic Operations														
9. Implement device														

11. EXPLAIN WHAT WAS DONE THIS QUARTER AND HOW IT COMPARES WITH WHAT WAS PROPOSED IN BLOCK 12 OF THE LAST QUARTERLY REPORT. DESCRIBE ANY UNANTICIPATED PROBLEMS THAT AROSE THIS QUARTER OR ANY RECENT IMPLEMENTATION.

Computer simulation of the small car NCHRP 350 Test 3-30 on the foam end treatment model was run. Simulations on polyethylene foam are now complete and indicate that this material is feasible for energy absorbing elements.

Little time was available to devote to this project during this quarter, as other tasks took precedence.

12. BRIEFLY DESCRIBE THE WORK PLANNED FOR THE NEXT QUARTER ALONG WITH ANY PROJECTED DEVIATIONS FROM THE WORK PLAN OR ANTICIPATED MODIFICATIONS TO THE COST ESTIMATE OR THE WORK SCHEDULE.

Another energy absorbing material will be explored, most likely rubber, to serve as an alternative material for this device. Some experimental data by others is available, which will be used in computer simulations to determine feasibility. The foundation for the end treatment will also be designed and "tested" in computer simulations.

13. Approved Funding		THIS FISCAL YEAR	TOTAL PROJECT	% EXPENDED TO DATE	**14.** Contractor Name	
		$ 0	$ 754,000		In-house	
Funds Expended To	Date 31 DEC 01	$ 11,016	$ 263,025	34.9 %	**15.** Responsible Unit: Roadside Safety Research Branch	
Approved Caltrans PY's		1 PY'S	5.43 PY'S		**16.** Date: 5 FEB 02	Quarter: 2nd FY 02
PY's Expended To	Date 31 DEC 01	0.13 PY'S	2.57 PY's	47.3 %	**17.** PI Signature *(and Contract Monitor Initials)*	

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